

WHAT IS CLAIMED IS:

1. A method for forming an emissive layer for an electroluminescent display, comprising:

5 positioning a substrate in spaced relation to a port of a microeffusion cell;

transporting the substrate across the port at a substantially constant rate;

effusing an emissive material from the port; and

10 adhering at least a portion of the emissive material effused from the port to a defined region of the substrate to form an emissive strip having a substantially constant width on the substrate.

15 2. The method of Claim 1, further comprising vacuuming effused emissive material molecules that do not adhere to the substrate.

20 3. The method of Claim 1, wherein the substrate is an optically transparent substrate.

4. The method of Claim 1, further comprising providing a pressure controlled vacuum environment including the microeffusion cell.

25 5. The method of Claim 1, wherein effusing an emissive material from the port effuses an emissive strip between .5 mm and 1 mm wide.

30 6. The method of Claim 1, wherein the substrate is transported across the microeffusion cell at a distance of less than .5 millimeters.

7. A method for forming a pixel of an electroluminescent display, comprising:

35 providing a substrate including a first series of substantially parallel and spaced apart contacts;

forming a first transport layer outwardly of the first series of contacts;

40 selectively depositing a plurality of emissive strips outwardly of the first transport layer, the emissive strips comprising a repeating pattern of disparate emissive strips;

forming a second transport layer outwardly of the plurality of emissive strips; and

45 forming a second series of substantially parallel and spaced apart contacts outwardly from the second transport layer and over the plurality of emissive strips, the second series of contacts substantially perpendicular to the first series of contacts.

50 8. The method of Claim 7, wherein:

the first transport layer is a hole transport layer;

the second transport layer is an electron transport layer;

55 the first series of contacts is formed from a high work function metal; and

the second series of contacts is formed from a low work function.

60 9. The method of Claim 7, wherein the first series of contacts is formed from indium-tin-oxide.

10. The method of Claim 7, wherein the first series of contacts is formed from an optically transparent metal oxide.

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11. The method of Claim 7, wherein the plurality of emissive strips are separated by .1 mm or less.

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12. The method of Claim 7, wherein the plurality of emissive strips are deposited in a repeating pattern of red, green, and blue emissive strips.

13. A product produced by the method of Claim 7.

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14. A method for forming an electroluminescent display, comprising:

80 providing a plurality of effusion cells, each effusion cell having a plurality of ports, the ports of each effusion cell offset from the ports of the other effusion cells;

85 providing an optically transparent substrate having a first plurality of contacts formed from a first metal and a first transport layer formed outwardly of the first contacts;

transporting the substrate across the plurality of effusion cells;

90 continuously effusing an emissive material from the ports in each effusion cell to form a plurality of emissive strips;

95 forming a second transport layer over the effused emissive material; and

forming a second plurality of contacts, each second contact orthogonal to the first plurality of contacts and over one of the emissive strips.

100 15. The method of Claim 14, wherein each emissive strip is separated from an adjacent emissive strip by less than .1 millimeter.

16. The method of Claim 14, wherein each second contact corresponds to one of the plurality of emissive strips.

105 17. A flat panel display formed by the method of Claim 14.

18. A microeffusion cell, comprising:  
a cell wall forming a cylinder including a plurality  
of ports operable to effuse material from within the  
110 cylinder;  
a heater element surrounding the cell wall and  
operable to heat the material within the cylinder;  
a material distribution system within the cylinder  
operable to evenly distribute the material through the  
115 cylinder;  
at least one vacuum tube associated with each port and  
operable to remove effused material molecules that do not  
adhere to a substrate.